# APPENDIX

# U.S. NUCLEAR REGULATORY COMMISSION REGION IV

NRC Inspection Report: 50-285/89-12 Operating License: DPR-40

Docket: 50-285

Licensee: Omaha Public Power District (OPPD) 1623 Harney Street Omaha, Nebraska 68102

Facility Name: Fort Calhoun Station (FCS)

Inspection At: FCS (Site), Blair, Nebraska

Inspection Conducted: February 21-24, 1989

Inspector:

M. E. Murphy, Reactor Inspector, Test Programs

3/7/89 Date

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Section, Division of Reactor Safety

Approved:

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W. C. Seidle, Chief, Test Programs Section Division of Reactor Safety

3/7/59 Date

Inspection Summary

Inspection Conducted February 21-24, 1989 (Report 50-285/89-12)

Areas Inspected: Routine, unannounced inspection of post modification testing and followup on the main steam safety valve issue.

Results: Within the areas inspected, no violations or deviations were identified. The licensee's post modification testing was found to be in conformance with the detailed design requirements. The testing acceptance criteria were satisfactory and in conformance with Technical Specifications (TS), regulatory requirements, and industry codes and standards. The licensee has not identified the root cause of the three main steam safety valves that failed to open during the last surveillance test (ST). The licensee does plan to modify or change the test method for the next ST.

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# DETAILS

## 1. Persons Contacted

#### OPPD

\*C. Brunnert, Supervisor, Operations Quality Assurance (QA)
\*H. Faulhaber, Manager, Electrical Instrumentation and Control (I&C)
\*J. Gasper, Training Manager
\*R. Jaworski, Manager, Station Engineering
J.\*Kecy, Supervisor, System Engineering
\*L. Kusek, Acting Plant Manager
\*D. Matthews, Acting Supervisor, Station Licensing
\*R. Phelps, Manager, Design Engineering

#### SWEC

B. Stecker, Test Engineer

#### NRC

P. Harrell, Senior Resident Inspector \*T. Reis, Resident Inspector

The NRC inspector also interviewed other licensee employees during the inspection.

\*Denotes those attending the exit interview on February 24, 1989.

## 2. Modification Testing (72701)

The inspection was conducted to ascertain that the licensee's modification testing program for new or modified structures, systems, and components was in conformance with detailed design documents, regulatory requirements, TS, and industry codes and standards. The NRC inspector reviewed completed Modifications 81-51, "Control Room Ventilation System Modification;" and 81-064, "Reactor Coolant System Hot Leg Level Indication Modification."

Modification 81-51 increased the capacity of the control room air conditioning units so that only one unit is needed for operation. This modification also eliminated unfiltered air leakage into the control room and significantly reduced ambient heat gains to the system.

Modification 81-064 was installed to prevent reaching a reactor coolant system level below that required for adequate suction head for the low pressure safety injection pumps during any shutdown and drained down

condition. This modification replaced the present level indicator with a dual indicator. A "RCS Refueling Level Low" alarm was installed.

The review of these completed modifications determined that test requirements were properly identified for component and system construction phase testing. Wiring continuity and separation checks, calibration of instrumentation and setpoints, and component functional tests were satisfactorily accomplished.

The acceptance tests were conducted using procedures which contained the appropriate features of scope, precautions, references, prerequisites, acceptance criteria, tagouts, and system lineups. The procedures and procedure change notices were reviewed and approved in accordance with the licensee's administrative procedures. The licensee's review and evaluation of the completed test procedures satisfactorily addressed that the test results met the established acceptance criteria. Test problems were resolved and retesting accomplished where required.

No violations or deviations were identified in this area of the inspection.

#### 3. Main Steam Safety Valves (MSSV) Setpoint Problem (92700)

The NRC inspector reviewed Licensee Event Report (LER) 88-023, which reported the MSSV setpoint problem encountered during the last refueling outage. While performing Surveillance Test (ST) ST-MSSV-1, "Main Steam Safety Valve Test," four of the MSSVs failed their lift point test. One valve was satisfactorily reset and retested.

Three of the valves failed to lift even with maximum allowed test pressure applied. These valves are Dresser Industries Maxiflow Model 6-inch 1500 psig class relief valves.

The licensee obtained concurrence from the vendor, issued a procedure change, and manually cycled all three valves. The original ST was repeated and all three valves again failed to lift with maximum allowed test pressure applied. The licensee uses the Hydrostet method for relief valve testing with the system at normal operating temperature and pressure.

Subsequent to the second test attempt, the three valves were removed from the system and sent to Wyle Laboratories. The laboratory was able to lift all three valves, two were marginally out-of-specification high and one was found to be in specification. All three valves were subsequently found to exceed the post-lift seat leakage test and were refurbished by a Dresser representative.

A review of previously reported MSSV setpoint problems reported in LERs 82-020, 84-002, 85-006, and 87-003 did not reveal any pattern of events.

A review of the test reported in LER 88-023 did not reveal any sequence of events or personnel actions that would explain or provide leads to a solution of the failure of the three valves to lift in situ. The licensee is still attempting to determine the root cause and at this time is studying the alternate test methods available to be used during the next refueling outage.

No violations or deviations were identified in this area of the inspection.

## 4. Exit Interview

The NRC inspector met with the personnel denoted in paragraph 1 on February 24, 1989. The NRC inspector summarized the scope and findings of the inspection. The licensee did not identify, as proprietary, any of the information provided to, or reviewed by, the NRC inspector.